GenCore version 4.5

OM protein - protein search, using sw model

Run on: March 14, 2001, 16:12:15 ; Search time 18.12 Seconds
(without alignments)
856.732 Million cell updates/sec

Title: US-09-455-486-6
Perfect score: 2351
Sequence: 1 MESISMMGSPKSLSETCLPN.....ALVLPSIVILDLLQLCRYPD 454

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 268485 seqs, 34193795 residues

Total number of hits satisfying chosen parameters: 268485

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_36:*
1: /SIDS1/gcgdata/geneseq/geneseqp/AA1980.DAT:*
2: /SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
3: /SIDS1/gcgdata/geneseq/geneseqp/AA1982.DAT:*
4: /SIDS1/gcgdata/geneseq/geneseqp/AA1983.DAT:*
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11: /SIDS1/gcgdata/geneseq/geneseqp/AA1990.DAT:*
12: /SIDS1/gcgdata/geneseq/geneseqp/AA1991.DAT:*
13: /SIDS1/gcgdata/geneseq/geneseqp/AA1992.DAT:*
14: /SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
15: /SIDS1/gcgdata/geneseq/geneseqp/AA1994.DAT:*
16: /SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
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19: /SIDS1/gcgdata/geneseq/geneseqp/AA1998.DAT:*
20: /SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
21: /SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	901	38.3	173	21	Y58195	Human STRAP-2 prot
2	736	31.3	141	21	Y52589	Human prostate gro
3	717	30.5	339	21	Y58194	Human STRAP-1 prot
4	695	29.6	339	20	W86309	Kidney injury asso
5	341	14.5	128	21	Y58197	Human STRAP-4 prot
6	324	13.8	132	21	Y95017	Human secreted pro
7	248	10.5	128	21	Y58196	Human STRAP-3 prot
8	107.5	4.6	695	13	R27558	FSHR. Homo sapien
9	107.5	4.6	695	14	R42082	FSH receptor. Hom
10	107.5	4.6	695	18	W14782	FSH receptor. Hom
11	107	4.6	34	21	Y58199	Human STRAP-1 pept
12	107	4.6	95	20	Y11840	Human 5' EST secre
13	102	4.3	109	20	Y12304	Human 5' EST secre
14	101	4.3	476	21	Y54039	Amino acid sequenc
15	101	4.3	503	13	R22667	50 kD subunit of S
16	99	4.2	365	21	Y70344	Human G protein-co
17	99	4.2	375	19	W51253	G-protein coupled
18	99	4.2	531	19	W51251	G-protein coupled
19	98	4.2	482	13	R21409	NADH dehydrogenase
20	98	4.2	692	11	R08038	Rat testicular lut
21	98	4.2	695	14	R30524	N-terminal of LH r
22	97.5	4.1	390	18	W06532	Gonadotropin recep
23	97	4.1	471	21	Y54040	Amino acid sequenc
24	97	4.1	699	14	R30517	N-terminal of LH r
25	96.5	4.1	353	21	Y54096	Enzyme EPSK involv
26	96.5	4.1	353	21	Y43798	Amino acid sequenc
27	96.5	4.1	686	20	Y56088	Yeast Fe3+-reducta
28	95	4.0	695	14	R30506	N-terminal of LH r
29	95	4.0	698	14	R30505	N-terminal of LH r
30	94	4.0	292	21	Y79251	Human elongase MAE
31	94	4.0	293	21	Y79256	Putative human hom
32	94	4.0	299	21	Y83932	Human elongase HSE
33	94	4.0	471	20	Y20061	B. burgdorferi ant
34	94	4.0	490	20	Y20060	B. burgdorferi ant
35	93	4.0	365	19	W51252	G-protein coupled
36	92.5	3.9	634	14	R30520	N-terminal of LH r
37	91.5	3.9	495	15	R44923	GGS1 glucose sensi
38	91.5	3.9	495	19	W49026	Saccharomyces cere
39	91	3.9	689	14	R30509	N-terminal of LH r
40	89.5	3.8	495	14	R41362	TSS1. Saccharomyc
41	89.5	3.8	495	18	W37441	Trehalose-6-phosph
42	89.5	3.8	495	18	W37427	Yeast trehalose-6-
43	89.5	3.8	968	21	Y78946	Polycystic kidney
44	89	3.8	660	20	Y34691	Chlamydia pneumonl
45	89	3.8	1582	16	R77088	Hamster sulphonylu

ALIGNMENTS

RESULT 1
Y58195
ID Y58195 standard; Protein; 173 AA.
XX
AC Y58195;
XX
DT 14-MAR-2000 (first entry)
XX
DE Human STRAP-2 protein (portion).
XX
KW Serpentine transmembrane antigen of the prostate; STRAP-2; prostate;
KW transmembrane domain; type IIIa membrane protein; expression: cancer;
KW antigen; immunisation; immune response; cellular; humoral;
KW anticancer vaccine; antibody; detection; diagnosis;
KW prognosis; monitoring; susceptibility; therapeutic inhibitor;
KW drug targetting; recombinant protein.
XX
OS Homo sapiens.
XX
PN WO9962941-A2.
XX
PD 09-DEC-1999.
XX
PF 01-JUN-1999; 99WO-US12157.
XX
PR 01-JUN-1998; 98US-0087520.
PR 30-JUN-1998; 98US-0091183.
XX
PA (UROG-) UROGENESYS INC.
PA (AFAR/) AFAR D E.
PA (HUBE/) HUBERT R S.
PA (LEON/) LEONG K.
PA (RAIT/) RAITANO A B.
PA (SAFF/) SAFFRAN D C.
XX

```
PI   Afar DE,  Hubert RS,  Leong K,  Raltano AB,  Saffran DC;
XX
DR   WPI; 2000-072832/06.
DR   N-PSDB; Z49398.
XX
PT   Novel proteins useful as diagnostic markers and therapeutic targets,
PT   particularly for prostatic cancer -
XX
PS   Claim 10; Fig 9; 83pp; English.
XX
CC   This sequence represents a portion of a novel human protein,
CC   STRAP-2 (serpentine transmembrane antigen of the prostate). STRAP-2 is
CC   highly homologous to STRAP-1 (Y58194), particularly throughout the
CC   predicted transmembrane domains, but is encoded by a distinct gene,
CC   localised to chromosome 7q21. STRAP-1 is the prototype member of the
CC   STRAP family of proteins (Y58194-Y58197) which exhibit a high degree of
CC   structural conservation, but which show no significant structural
CC   homology to known human proteins. STRAP-1 is characterised by six
CC   transmembrane domains and intracellular N- and C-termini, suggesting
CC   that it folds in a "serpentine" manner into three extracellular and two
CC   intracellular loops. STRAP-2 exhibits a markedly different mRNA and
CC   protein expression profile relative to STRAP-1, suggesting that these
CC   two STRAP family members are differentially regulated. STRAP-2 expression
CC   appears to be very prostate specific, as significant mRNA expression is
CC   not detected in a variety of normal tissues. STRAP-2 expression is
CC   downregulated in some prostate cancers, whereas STRAP-1 expression
CC   remains at a high level. In non-prostate cancers, STRAP-2 expression is
CC   generally absent. The function of the STRAP proteins is not known. They
CC   may be ion channels (from the presence of six transmembrane domains, a
CC   feature which is shared by certain ion channels) or gap-junction proteins
CC   (from immunohistochemical staining). STRAP-1 and STRAP-2 are cell-surface
CC   tumour antigens. Immunisation with a STRAP protein induces cellular and
CC   humoral immune responses against STRAP-expressing cells. STRAP proteins
CC   may be used to identify specific-binding agents, to produce anticancer
CC   vaccines and to generate specific antibodies. The antibodies may be used
CC   for detection, prognosis, and monitoring of cancers (or susceptibility to
CC   cancer), as therapeutic inhibitors or to target therapeutic agents to
CC   their site of action. STRAP nucleic acids may be used for recombinant
CC   protein production, as diagnostic and prognostic reagents, for
CC   identifying STRAP-expressing cells for screening inhibitors of STRAP
CC   expression and for therapeutic modulation/inhibition of STRAP
CC   expression. Since high levels of STRAP proteins are exposed on the cell
CC   surface, they are easily targetted by systemically administered agents,
CC   and because they are expressed mainly on prostatic epithelial cells,
CC   agents targetted to them should have minimal side effects on other
CC   tissues.
XX
SQ   Sequence   173 AA;


  Query Match             38.3%;  Score 901;  DB 21;  Length 173;
  Best Local Similarity   100.0%;  Pred. No. 1.9e-89;
  Matches  173;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy     246 DFYKIPIEIVNKTLPIVAITLLSLVYLAGLLAAAYQLYYGTKYRRFPPWLETWLQCRKQL 305
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Db       1 dfykipieivnktlplvaltllslvylaglllaaayqlyygtkyrrfppwletwlqcrkql 60

Qy     306 GLLSFFFAMVHVAYSLCLPMRRSERYLFLNMAYQQVHANIENSWNEEEVWRIEMYISFGI 365
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 gllsfffamvhvayslclpmrrserylfinmayqqvhanienswneeevwriemyisfgi 120

Qy     366 MSLGLLSLLAVTSIPSVSNALNWREFSFIQSTLGYVALLISTFHVLIYGWKRA 418
           |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 mslgllsllavtsipsvsnalnwrefsfiqstlgyvalllstfhvliygwkra 173


RESULT   2
Y52589
ID   Y52589 standard; Protein; 141 AA.
XX
AC   Y52589;
XX
DT   07-MAR-2000  (first entry)
XX
DE   Human prostate growth-associated membrane protein PGAMP-1.
XX
KW   Prostate growth-associated membrane protein; PGAMP-1; prostate;
KW   consensus; antibody; screening; modulator; agonist; antagonist;
KW   therapeutic agent; cancer; solid tumour; leukaemia; lymphoma;
KW   reproductive disorder; infertility; endometriosis;
KW   polycystic ovarian syndrome; prostatitis; recombinant expression;
KW   gene therapy; antisense therapy; ribozyme; diagnosis; diagnosis;
KW   monitoring; immunoassay; targetting; drug delivery; drug screening.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   15
FT                   /note= "Phosphorylated by protein kinase C"
FT   Modified-site   35
FT                   /note= "Phosphorylated by casein kinase II"
FT   Domain          44..67
FT                   /note= "Transmembrane domain 1"
FT   Domain          81..102
FT                   /note= "Transmembrane domain 2"
FT   Modified-site   110
FT                   /note= "Phosphorylated by tyrosine kinase"
FT   Domain          117..135
FT                   /note= "Transmembrane domain 3"
XX
PN   WO9961469-A2.
XX
PD   02-DEC-1999.
XX
PF   17-MAY-1999;   99WO-US10888.
XX
PR   22-MAY-1998;   98US-0083521.
XX
PA   (INCY-) INCYTE PHARM INC.
XX
PI   Lal P,  Guegler KJ,  Corley NC;
XX
DR   WPI; 2000-062671/05.
DR   N-PSDB; Z46296.
XX
PT   New human prostate growth-associated membrane proteins, for treating or
PT   preventing cancer and reproductive disorders -
XX
PS   Claim 1; Fig 1; 72pp; English.
XX
CC   This sequence represents human prostate growth-associated protein
CC   PGAMP-1. Nucleotides encoding PGAMP-1 were initially identified
CC   in a prostate cDNA library, this sequence representing a consensus.
CC   Human prostate growth associated membrane proteins PGAMP-1 and PGAMP-2
CC   (Y52590) may be used to raise specific antibodies and to screen for
CC   specific modulators (agonists, antagonists or other potential
CC   therapeutic agents). Antagonists of PGAMP are used to treat or prevent a
CC   wide range of cancers (solid tumours, leukaemia, lymphoma etc.) and
CC   reproductive disorders (such as infertility, endometriosis, polycystic
CC   ovarian syndrome, prostatitis). PGAMP-encoding nucleic acids, its
CC   fragments and complements, may be used for recombinant production of
CC   PGAMP proteins, in gene therapy (e.g., as antisense molecules, triplex-
CC   forming molecules and ribozymes), and as diagnostic probes and primers.
CC   Anti-PGAMP antibodies may be used for diagnosis and monitoring of
CC   PGAMP-related diseases by standard immunoassays, as therapeutic
CC   antagonists (including targetted delivery of other drugs), and in
CC   competitive drug screens.
XX
SQ   Sequence   141 AA;


  Query Match             31.3%;  Score 736;  DB 21;  Length 141;
  Best Local Similarity   100.0%;  Pred. No. 9.7e-72;
  Matches  141;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy     314 MVHVAYSLCLPMRRSERYLFLNMAYQQVHANIENSWNEEEVWRIEMYISFGIMSLGLLSL 373
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1 mvhvayslcipmrrserylflnmayqqvhanienswneeevwriemyisfgimslgllsl 60

Qy     374 LAVTSIPSVSNALNWREFSFIQSTLGYVALLISTFHVLIYGWKRAFEEEYYRFYTPPNFV 433
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 lavtsipsvsnalnwrefsfiqstlgyvallistfhvliygwkrafeeeyyrfytppnfv 120

Qy     434 LALVLPSIVILDLLQLCRYPD 454
           |||||||||||||||||||||
Db     121 ialvlpsivildllqlcrypd 141


RESULT   3
Y58194
ID   Y58194 standard; Protein; 339 AA.
XX
AC   Y58194;
XX
DT   14-MAR-2000  (first entry)
XX
DE   Human STRAP-1 protein.
XX
KW   Serpentine transmembrane antigen of the prostate; STRAP-1; prostate;
KW   transmembrane domain; type IIIa membrane protein; expression; cancer;
KW   prostate cancer; bladder cancer; colon cancer; pancreatic cancer;
KW   ovarian cancer; tumour antigen; immunisation; immune response;
KW   celluiar; humoral; anticancer vaccine; antibody; detection; diagnosis;
KW   prognosis; monitoring; susceptibility; therapeutic inhibitor;
KW   drug targettlng; recombinant protein.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Quallfiers
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FT                   /note= "Intracellular region 1"
FT   Domain          70..91
FT                   /note= "Transmembrane domain 1"
FT   Region          92..113
FT                   /note= "Extracellular reglon 1 (Y58198)"
FT   Domain          114..136
FT                   /note= "Transmembrane domain 2"
FT   Region          137..162
FT                   /note= "Intracellular region 2"
FT   Domaln          163..184
FT                   /note= "Transmembrane domain 3"
FT   Region          185..218
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FT   Domain          219..241
FT                   /note= "Transmembrane domain 4"
FT   Region          242..253
FT                   /note= "Intracellular region 3"
FT   Domain          252..276
FT                   /note= "Transmembrane domain 5"
FT   Region          277..291
FT                   /note= "Extracellular region 3 (Y58200)"
FT   Domain          292..313
FT                   /note= "Transmembrane domain 6"
FT   Region          314..339
FT                   /note= "Intracellular region 4"
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PN   WO9962941-A2.
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PD   09-DEC-1999.
XX
PF   01-JUN-1999;   99WO-US12157.
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PR   01-JUN-1998;   98US-0087520.
PR   30-JUN-1998;   98US-0091183.
XX
PA   (UROG-) UROGENESYS INC.
PA   (AFAR/) AFAR D E.
PA   (HUBE/) HUBERT R S.
PA   (LEON/) LEONG K.
PA   (RAIT/) RAITANO A B.
PA   (SAFF/) SAFFRAN D C.
XX
PI   Afar DE,  Hubert RS,  Leong K,  Raitano AB,  Saffran DC;
XX
DR   WPI; 2000-072832/06.
DR   N-PSDB; Z49395, Z49396.
XX
PT   Novel proteins usefui as diagnostic markers and therapeutic targets,
PT   particuiarly for prostatic cancer
XX
PS   Claim 1; Fig 1A; 83pp; English.
XX
CC   This sequence represents a novei human protein, STRAP-1 (serpentine
CC   transmembrane antigen of the prostate). STRAP-1 is the prototype
CC   member of the STRAP family of proteins (Y58194-Y58197) which
CC   exhibit a high degree of structural conservation, but which show
CC   no signlficant structural homology to known human proteins. The STRAP-1
CC   gene has been localised to chromosome 7p22. STRAP-1 is thought to be a
CC   type IIIa membrane protein and is expressed predomlnantly in prostate
CC   celis in normal human tissues. Structurally, STRAP-1 is a 339 amino
CC   acid protein characterised by six transmembrane domains and intracellular
CC   N- and C-termini, suggesting that it folds in a "serpentine" manner into
CC   three extracelluiar and two intracellular loops. STRAP-1 mRNA and protein
CC   expression is maintained at high levels and throughout all stages of
CC   prostate cancer. STRAP-1 mRNA and/or protein is also overexpressed in
CC   certain other cancers, including bladder, colon, pancreatic and ovarian
CC   cancer. The function of the STRAP proteins is not known. They may be ion
CC   channels (from the presence of six transmembrane domains, a feature
CC   which is shared by certain ion channels) or gap-junction proteins
CC   (from immunohistochemical staining). STRAP-1 and STRAP-2 are cell-surface
CC   tumour antigens. Immunisation with a STRAP protein induces celluiar and
CC   humorai immune responses against STRAP-expressing cells. STRAP proteins
CC   may be used to identify specific-binding agents, to produce anticancer
CC   vacclnes and to generate specific antibodies. The antibodies may be used
CC   for detection, prognosis, and monitoring of cancers (or susceptibility to
CC   cancer), as therapeutic inhibitors or to target therapeutlc agents to
CC   their site of action. STRAP nucleic acids may be used for recombinant
CC   protein production, as diagnostic and prognostic reagents, for
CC   identifying STRAP-expressing cells for screening inhibitors of STRAP
CC   expression and for therapeutic modulation/inhibition of STRAP
CC   expression. Since high levels of STRAP proteins are exposed on the ceii
CC   surface, they are easily targetted by systemically administered agents,
CC   and because they are expressed mainly on prostatic epitheiiai celis,
CC   agents targetted to them should have minimal side effects on other
CC   tissues.
XX
SQ   Sequence   339 AA;


  Query Match             30.5%;  Score 717;  DB 21;  Length 339;
  Best Local Similarity   54.9%;  Pred. No. 4:2e-69;
  Matches  130;  Conservative   48;  Mismatches   59;  Indels    0;  Gaps    0;

Qy     208 LFTLWRGPVVVAISLATFFFLYSFVRDVIHPYARNQQSDFYKIPIEIVNKTLPIVAITLL 267
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Db      67 lfpqwhlpikiaaiiasltflytllrevihplatshqqyfykiplivinkvlpmvsitll 126

Qy     268 SLVYLAGLLAAAYQLYYGTKYRRFPPWLETWLQCRKQLGLLSFFFAMVHVAYSLCLPMRR 327
           :|||| |::|| ||: |||::|| ||: |: |||| ||||||||::|  |||  ||||
Db     127 alvylpgviaaivqlhngtkykkfphwldkwmltrkqfglisfffavihaiyslsypmrr 186

Qy     328 SERYLFLNMAYQQVHANIENSWNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALN 387
           | ||  || ||||| | |::| | :|||:|:|:| ||: | :|:|||||||||::|
Db     187 syrykllnwayqqvqqnkedawiehdvwrmeiyvsigivglailallavtsipsvsdslt 246

Qy     388 WREFSFIQSTLGYVALLISTFHVLIYGWKRAFEEEYYRFYTPPNFVLALVLPSIVIL 444
           |||| :||| || |:||: | | ||: | :  : : : :|||| |::|: || :|::
Db     247 wrefhyiqsklgivslligtihalifawnkwidikqfvwytpptfmiavflpivvli 303


RESULT   4
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```
W86309
ID   W86309 standard; Protein; 339 AA.
XX
AC   W86309;
XX
DT   01-MAR-1999  (first entry)
XX
DE   Kidney injury associated molecule HW018 protein.
XX
KW   Kidney injury associated molecule; kidney injury related molecule;
KW   KIM; tissue growth promotion; regeneration; renal condition;
KW   acute renal failure; acute nephritis; tumour.
XX
OS   Rattus sp.
XX
PN   WO9853071-A1.
XX
PD   26-NOV-1998.
XX
PF   22-MAY-1998;   98WO-US10547.
XX
PR   23-MAY-1997;   97US-0047491.
PR   23-MAY-1997;   97US-0047490.
XX
PA   (BIOJ ) BIOGEN INC.
XX
PI   Cate RL,  Hession CA,  Sanicola-Nadel M,  Wei H;
XX
DR   WPI; 1999-045312/04.
DR   N-PSDB; V80586.
XX
PT   Kidney injury-associated molecule, KIM, polypeptides - upregulated
PT   in injured or regenerating tissues, useful to promote tissue growth
PT   and regeneration, especially to treat renal conditions
XX
PS   Claim 17; Page 57-58; 213pp; English.
XX
CC   The present sequence represents a kidney injury associated molecule
CC   (KIM) protein. KIM proteins can be administered therapeutically
CC   by expressing KIM encoding polynucleotides, to promote growth and/or
CC   survival of damaged tissue (e.g. renal tissue), since the KIM proteins
CC   are upregulated in injured or regeneratlng (especially renal) tissues.
CC   KIM fusion proteins, conjugates, antibodies and vectors can also be used
CC   therapeutically, e.g. these or the KIM proteins may be included with an
CC   acceptable carrier in pharmaceutical compositions, useful for therapy/
CC   prophylaxis of conditions associated with disfunction/disregulation of
CC   KIM genes or proteins, especially renal diseases or impairments of renal
CC   function in humans (e.g. acute renal failure, acute nephritis). The
CC   polynucleotides can be used to produce antisense sequences which, when
CC   internalised into cells, can disrupt expression of a cellular KIM gene,
CC   also useful in therapy (e.g. to block the growth of tumours dependent on
CC   KIM for growth) or compositions. The proteins and polynucleotides are
CC   useful diagnostically e.g. to detect and quantify renal injury/disease
CC   (indicative of increased risk, or presence of, renal injury or impaired
CC   function), or abnormal responses to tissue injury (indicative of
CC   increased risk, or presence of, an autoimmune response or abnormal
CC   tissue growth arising from/affecting renal tissue). The proteins can
CC   also be used to locate KIM-producing cells (especially specific loci,
CC   e.g. tissue masses abnormally producing/expressing KIM such as tumours
CC   arising from/affecting renal tissue), by contacting cells with an
CC   imageable KIM-binding reagent and imaging reagent accumulation.
XX
SQ   Sequence   339 AA;

  Query Match             29.6%;  Score 695;  DB 20;  Length 339;
  Best Local Similarity   52.3%;  Pred. No. 1e-66;
  Matches  127;  Conservative   52;  Mismatches   64;  Indels    0;  Gaps    0;

Qy     208 LFTLWRGPVVVAISLATFFFLYSFVRDVIHPYARNQQSDFYKIPIEIVNKTLPIVAITLL 267
           ||  |: |: ||  |::  |||: :|::|:|   :::  ||||| :||| ||:|:|||| 
Db      67 lfpnwqlpikvaavlssltflytllreiiyplvasreqyfykipilvvnkvlpmvsitll 126

Qy     268 SLVYLAGLLAAAYQLYYGTKYRRFPPWLETWLQCRKQLGLLSFFFAMVHVAYSLCLPMRR 327
           :|||| | :||  ||  ||||::|||||: |:  ||| ||||||||::|  |||  |||| 
Db     127 alvylpgeiaavvqlrngtkykkfppwldrwmlarkqfgllsfffavlhaiyslsypmrr 186

Qy     328 SERYLFLNMAYQQVHANIENSWNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALN 387
           | ||  || ||:||  : |::| | :|||:|:|:| ||: | :|:|||||||||||::| 
Db     187 syrykllnwaykqvqqskedawvehdvwrmeiyvslgivglailallavtsipsvsdsit 246

Qy     388 WREFSFIQSTLGYVALLISTFHVLIYGWKRAFEEEYYRFYTPPNFVLALVLPSIVILDLL 447
           |||| :||| || |:||: | |  |: | :  :   : :| || |::|: ||::|::  : 
Db     247 wrefhyiqsklgivslllgtvhasifawnkwvdisqfvwympptfmiavflptvvlicki 306

Qy     448 QLC 450
           ||| 
Db     307 vlc 309


RESULT   5
Y58197
ID   Y58197 standard: Protein; 128 AA.
XX
AC   Y58197;
XX
DT   14-MAR-2000  (first entry)
XX
DE   Human STRAP-4 protein, encoded by placenta EST R80991.
XX
KW   Serpentine transmembrane antigen of the prostate; STRAP-4; placenta;
KW   transmembrane domain; type IIIa membrane protein; expression; cancer;
KW   antigen; immunisation; immune response; cellular; humoral; prostate;
KW   anticancer vaccine; antibody; detection; diagnosis; liver;
KW   prognosis; monitoring; susceptibility; therapeutic inhibitor;
KW   drug targetting; recombinant protein; expressed sequence tag; EST.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 15
FT                   /note= "Encoded by NAC"
FT   Misc-difference 74
FT                   /note= "Encoded by NTC"
FT   Misc-difference 79
FT                   /note= "Encoded by CTN"
FT   Misc-difference 99
FT                   /note= "Encoded by CTN"
FT   Misc-difference 105
FT                   /note= "Encoded by NTC"
FT   Misc-difference 122
FT                   /note= "Encoded by NAC"
XX
PN   WO9962941-A2.
XX
PD   09-DEC-1999.
XX
PF   01-JUN-1999;   99WO-US12157.
XX
PR   01-JUN-1998;   98US-0087520.
PR   30-JUN-1998;   98US-0091183.
XX
PA   (UROG-) UROGENESYS INC.
PA   (AFAR/) AFAR D E.
PA   (HUBE/) HUBERT R S.
PA   (LEON/) LEONG K.
PA   (RAIT/) RAITANO A B.
PA   (SAFF/) SAFFRAN D C.
XX
PI   Afar DE,  Hubert RS,  Leong K,  Raitano AB,  Saffran DC;
XX
DR   WPI; 2000-072832/06.
DR   N-PSDB; Z49402.
XX
PT   Novel proteins useful as diagnostic markers and therapeutic targets,
PT   particularly for prostatic cancer -
```

```
XX
PS   Example 5; Fig 11B; 83pp; English.
XX
CC   This sequence represents a novel human protein, STRAP-4
CC   (serpentine transmembrane antigen of the prostate) encoded
CC   by human placenta EST (expressed sequence tag) R80991. STRAP-4 is
CC   a transmembrane protein closely related to STRAP-1 (Y58194) and
CC   STRAP-2 (Y58195), but it is predominantly expressed in liver
CC   tissue. The STRAP-4 gene has been localised to chromosome
CC   2q14-q21. STRAP-1 is the prototype member of the STRAP family of proteins
CC   (Y58194-Y58197) which exhibit a high degree of structural conservation,
CC   but which show no significant structural homology to known human
CC   proteins. STRAP-1 is characterised by six transmembrane domains and
CC   intracellular N- and C-termini, suggesting that it folds in a
CC   "serpentine" manner into three extracellular and two intracellular
CC   loops. The function of the STRAP proteins is not known. They may be
CC   ion channels (from the presence of six transmembrane domains, a feature
CC   which is shared by certain ion channels) or gap-junction proteins
CC   (from immunohistochemical staining). STRAP-1 and STRAP-2 are cell-surface
CC   tumour antigens. Immunisation with a STRAP protein induces cellular and
CC   humoral immune responses against STRAP-expressing cells. STRAP proteins
CC   may be used to identify specific-binding agents, to produce anticancer
CC   vaccines and to generate specific antibodies. The antibodies may be used
CC   for detection, prognosis, and monitoring of cancers (or susceptibility to
CC   cancer), as therapeutic inhibitors or to target therapeutic agents to
CC   their site of action. STRAP nucleic acids may be used for recombinant
CC   protein production, as diagnostic and prognostic reagents, for
CC   identifying STRAP-expressing cells for screening inhibitors of STRAP
CC   expression and for therapeutic modulation/inhibition of STRAP
CC   expression. Since high levels of STRAP proteins are exposed on the cell
CC   surface, they are easily targetted by systemically administered agents,
CC   and because they are expressed mainly on prostatic epithelial cells,
CC   agents targetted to them should have minimal side effects on other
CC   tissues.
XX
SQ   Sequence   128 AA;


  Query Match             14.5%;  Score 341;  DB 21;  Length 128;
  Best Local Similarity   61.3%;  Pred. No. 4.2e-29;
  Matches   57;  Conservative   20;  Mismatches   16;  Indels    0;  Gaps    0;

Qy     349 WNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALNWREFSFIQSTLGYVALLISTF 408
           | :|||||:|:|:| |:::|| ||||||||:||::|:||||||||:||:||:|| ::||
Db      20 wvkeevwrmeiylslgvlalgtlsllavtslpsianslnwrefsfvqsslgfvaxvlstl 79

Qy     409 HVLIYGWKRAFEEEYYRFYTPPNFVLALVLPSI 441
           | | ||| ||||| |:|| || |   |::| :
Db      80 htltygwtrafeesrykfylpptftxtllvpcv 112


RESULT   6
Y95017
ID   Y95017 standard; Protein; 132 AA.
XX
AC   Y95017;
XX
DT   19-JUN-2000  (first entry)
XX
DE   Human secreted protein vp17_1, SEQ ID NO:74.
XX
KW   Human; secreted protein: cancer; tumour; cardiovascular disorder;
KW   blood disorder; haemophilia; autoimmune disease; diabetes; inflammation;
KW   infection; fungal; bacterial; viral; HIV; allergy; arthritis;
KW   neurodegenerative disease; asthma; contraceptive.
XX
OS   Homo sapiens.
XX
PN   WO200011015-A1.
XX
PD   02-MAR-2000.
XX
PF   24-AUG-1999;   99WO-US19351.
XX
PR   24-AUG-1998;   98US-0097638.
PR   24-AUG-1998;   98US-0097659.
PR   09-SEP-1998;   98US-0099618.
PR   28-SEP-1998;   98US-0102092.
PR   25-NOV-1998;   98US-0109978.
PR   23-DEC-1998;   98US-0113645.
PR   23-DEC-1998;   98US-0113646.
PR   23-AUG-1999;   99US-0379246.
XX
PA   (ALPH-) ALPHAGENE INC.
XX
PI   Valenzuela D,  Yuan O,  Hoffman H,  Hall J,  Rapiejko P;
XX
DR   WPI; 2000-224657/19.
XX
PT   New secreted or transmembrane proteins and polynucleotides encoding
PT   them, useful for treating neurodegenerative disorders, autoimmune
PT   diseases and cancer -
XX
PS   Claim 83; Page 334; 357pp; English.
XX
CC   The invention relates to 40 human secreted proteins (Y94981-Y95020),
CC   and cDNA sequences encoding them (A23423-A23462). The secreted proteins
CC   of the invention include those that are thought to be only partially
CC   secreted, i.e., transmembrane proteins. The proteins of the invention may
CC   exhibit one or more activities selected from the following: cytokine
CC   activity; cell proliferation; differentiation; immune modulation;
CC   haematopoiesis regulation; tissue growth activity; activin/inhibin
CC   activity; chemotactic/chemokinetic activity; haemostatic and
CC   thrombolytic activity; anti-inflammatory activity; and tumour inhibition
CC   activity. The proteins may be administered to patients as vaccines, and
CC   the nucleotides may be used as part of a gene therapy regime. Diseases or
CC   conditions that may be treated using the proteins or nucleotides of the
CC   invention include autoimmune diseases; genetic disorders; haemophilia;
CC   cardiovascular diseases; cancer: bacterial, fungal and viral infections,
CC   especially HIV; multiple sclerosis; rheumatoid arthritis; pulmonary
CC   inflammation; Guillain-Barre syndrome; insulin dependent diabetes
CC   mellitus; and allergic reactions such as asthma and anaemia. They may
CC   also be used for treating wounds, burns, ulcers, osteoporosis,
CC   osteoarthritis, periodontal diseases, Aizheimer's disease, Parkinson's
CC   disease, Huntington's disease and amyotrophic lateral sclerosis (ALS).
CC   Proteins with activin/inhibin activity may additionally be useful as
CC   contraceptives. Nucleic acid sequences of the invention may be used in
CC   chromosome mapping, and as a source of diagnostic primers and probes.
CC   The present sequence represents one of the 40 proteins of the
CC   invention.
XX
SQ   Sequence   132 AA;


  Query Match             13.8%;  Score 324;  DB 21;  Length 132;
  Best Local Similarity   63.6%;  Pred. No. 3e-27;
  Matches   56;  Conservative   19;  Mismatches   13;  Indels    0;  Gaps    0;

Qy     357 IEMYISFGIMSLGLLSLLAVTSIPSVSNALNWREFSFIQSTLGYVALLISTFHVLIYGWK 416
           :|:|:| |:::|| ||||||||:||::|:||||||||:||:||:|||::|| | | |||
Db       1 meiylslgvlalgtlsllavtslpsianslnwrefsfvqsslgfvalvlstlhtltygwt 60

Qy     417 RAFEEEYYRFYTPPNFVLALVLPSIVIL 444
           |||||  |:|| || | | |::| :|||
Db      61 rafeesrykfylpptftltllvpcvvil 88


RESULT   7
Y58196
ID   Y58196 standard; Protein; 128 AA.
XX
AC   Y58196;
XX
DT   14-MAR-2000  (first entry)
XX
DE   Human STRAP-3 protein, encoded by testis EST AI139607.
```

```
XX
KW   Serpentine transmembrane antigen of the prostate; STRAP-3; placenta;
KW   transmembrane domain; type IIIa membrane protein; expression; cancer;
KW   antigen; immunisation; immune response; cellular; humoral; prostate;
KW   anticancer vaccine; antibody; detection; diagnosis; testis;
KW   prognosis; monitoring; susceptibility; therapeutic inhibitor;
KW   drug targetting; recombinant protein; expressed sequence tag; EST.
XX
OS   Homo sapiens.
XX
PN   WO9962941-A2.
XX
PD   09-DEC-1999.
XX
PF   01-JUN-1999;   99WO-US12157.
XX
PR   01-JUN-1998;   98US-0087520.
PR   30-JUN-1998;   98US-0091183.
XX
PA   (UROG-) UROGENESYS INC.
PA   (AFAR/) AFAR D E.
PA   (HUBE/) HUBERT R S.
PA   (LEON/) LEONG K.
PA   (RAIT/) RAITANO A B.
PA   (SAFF/) SAFFRAN D C.
XX
PI   Afar DE, Hubert RS, Leong K, Raitano AB, Saffran DC:
XX
DR   WPI; 2000-072832/06.
DR   N-PSDB; Z49401.
XX
PT   Novel proteins useful as diagnostic markers and therapeutic targets,
PT   particularly for prostatic cancer -
XX
PS   Exampie 5; Fig 11B; 83pp; English.
XX
CC   This sequence represents a novel human protein, STRAP-3 :
CC   (serpentine transmembrane antigen of the prostate) encoded
CC   by human testis EST (expressed sequence tag) AI139607. STRAP-3 is
CC   a transmembrane protein closely related to STRAP-1 (Y58194) and STRAP-2
CC   (Y58195), but its expression is predominantly restricted to placenta
CC   although there is a smaller degree of expression in normal prostate
CC   tissue. It does not appear to be expressed in other normal tissue or
CC   in prostate cancer. The STRAP-3 gene has been localised to chromosome
CC   7q21. STRAP-1 is the prototype member of the STRAP family of proteins
CC   (Y58194-Y58197) which exhibit a high degree of structural conservation,
CC   but which show no significant structural homology to known human
CC   proteins. STRAP-1 is characterised by six transmembrane domains and
CC   intracellular N- and C-termini, suggesting that it folds in a
CC   "serpentine" manner into three extracellular and two intracellular
CC   loops. The function of the STRAP proteins is not known. They may be
CC   ion channels (from the presence of six transmembrane domains, a feature
CC   which is shared by certain ion channels) or gap-junction proteins
CC   (from immunohistochemical staining). STRAP-1 and STRAP-2 are cell-surface
CC   tumour antigens. Immunisation with a STRAP protein induces cellular and
CC   humoral immune responses against STRAP-expressing cells. STRAP proteins
CC   may be used to identify specific-binding agents, to produce anticancer
CC   vaccines and to generate specific antibodies. The antibodies may be used
CC   for detection, prognosis, and monitoring of cancers (or susceptibility to
CC   cancer), as therapeutic inhibitors or to target therapeutic agents to
CC   their site of action. STRAP nucleic acids may be used for recombinant
CC   protein production, as diagnostic and prognostic reagents, for
CC   identifying STRAP-expressing cells for screening inhibitors of STRAP
CC   expression and for therapeutic modulation/inhibition of STRAP
CC   expression. Since high levels of STRAP proteins are exposed on the cell
CC   surface, they are easily targetted by systemically administered agents,
CC   and because they are expressed mainly on prostatic epithelial cells,
CC   agents targetted to them should have minimal side effects on other
CC   tissues.
XX
SQ   Sequence   128 AA;

  Query Match          10.5%;  Score 248;  DB 21;  Length 128;
  Best Local Similarity   44.4%;  Pred. No. 4.7e-19;
  Matches   44;  Conservative   20;  Mismatches   35;  Indels    0;  Gaps    0;

Qy     346 ENSWNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALNWREFSFIQSTLGYVALLI 405
           || ::    |  : |:: ||:   |  || :|||:||||||:||||| |:|| |||: |::
Db       3 enpfstssawlsdsyvaigilgfflfvllgitslpsvsnavnwrefrfvqsklgyitlii 62

Qy     406 STFHVLIYGWKRAFEEEYYRFYTPPNFVLALVLPSIVIL 444
           | | |:|| ||       |:| |  :|| |::|  |::
Db      63 ctahtlvyggkrflspsnirwylpaayvlgliipctviv 101


RESULT   8
R27558
ID   R27558 standard; Protein; 695 AA.
XX
AC   R27558;
XX
DT   04-MAR-1993  (first entry)
XX
DE   FSHR.
XX
KW   Human; follicle stimulating hormone receptor; maturation;
KW   spermatogenesis; birth control.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..17
FT                   /note= "signanl peptide"
FT   Protein         18..695
FT                   /note= "mature hFSHR "
FT   Domain          18..366
FT                   /note= "N-terminal extracellular domain"
FT   Domain          367..620
FT                   /note= "transmembrane domain"
FT   Domain          367..387
FT                   /note= "transmembrane region I"
FT   Domain          399..421
FT                   /note= "transmembrane region II"
FT   Domain          444..465
FT                   /note= "transmembrane region III"
FT   Domain          486..508
FT                   /note= "transmembrane region IV"
FT   Domain          529..550
FT                   /note= "transmembrane region V"
FT   Domain          574..597
FT                   /note= "transmembrane region VI"
FT   Domain          609..630
FT                   /note= "transmembrane region VII"
FT   Domain          631..695
FT                   /note= "C-terminal intracellular domain"
XX
PN   WO9216620-A.
XX
PD   01-OCT-1992.
XX
PF   02-JAN-1992;   92WO-US00122.
XX
PR   15-MAR-1991;   91US-0670085.
XX
PA   (ISTF ) ARS APPL RES SYST HOLDING NV.
XX
PI   Cheng SVY, Kelton CA, Nugent NP, Schweickhardt RL;
XX
DR   WPI; 1992-349206/42.
DR   N-PSDB; Q29377.
XX
PT   Pure human FSH receptor, fragments and mutants - for preventing
PT   follicle growth, maturation and spermatogenesis, also for use of
PT   appropriate cell lines for bio-assays of FSH
XX
```

```
PS   Claim 2; Page 25; 48pp; English.
XX
CC   The protein sequence of human follicle stimulating hormone receptor
CC   (FSHR) was deduced from the DNA sequence obtd. by screening a lambda
CC   gt11 cDNA library constructed from RNA extracted from human testis
CC   with a rat FSHR cDNA clone as a probe.  hFSHR binds to FSH to reduce
CC   endogenous FSH bioactivity, in females to prevent follicle growth and
CC   maturation and in males to prevent spermatogenesis, i.e. as a birth
CC   control agent.  hFSHR may be used in assays for detection of FSH
CC   bioactivity and in X-ray crystallographic analysis to develop molecular
CC   models useful in defining the tertiary structure of the hormone binding
CC   domains of hFSHR.  This will aid the design of peptides with FSH
CC   (ant)agonist activity.
XX
SQ   Sequence   695 AA;


  Query Match             4.6%;  Score 107.5;  DB 13;  Length 695;
  Best Local Similarity   17.0%;  Pred. No. 0.0098;
  Matches   84;  Conservative   77;  Mismatches  148;  Indels  185;  Gaps   17;

Qy      79 HEDALTKTNIIFVAIHREHYTSLWDLRHLLVG----------------KILIDVSNNMR 121
           ||  : | | : :  |: | : :| :|::||:                  |:|:|: :|:
Db      98 helriekannl-lyinpeafqnlpnlqyllisntgikhlpdvhkihslqkvlldiqdnin 156

Qy     122 INQYPESNAEYLASLFPDSLIVKGFNVVSAWALQLGPKDASRQVYICSNNIQARQQVIEL 181
           |:           ::  :| :   |  |  |      |:  :::: |:
Db     157 ih----------tiernsfvglsfesvilwl----nkngiqeihnca---------- 189

Qy     182 ARQLNFIPIDLGSLSSAREIENLPLRLFTLWRGPVVVAISLATFFFLYSFVRDVIHPYAR 241
               |   :|  :||    :| ||  :|    |||:: ||      | |:  : :
Db     190 ---fngtqldelnlsdnnnleelpndvfhgasgpvlldisrtrihslpsyglenlkklra 246

Qy     242 NQQSDFYKIPIEIVNKTL-PIVAITLLSLVY---------------------------- 271
           :  |:|      ||  :||:   || |
Db     247 rstynlkklp------tleklvalmeasltypshccafanwrrqiselhpicnksilrqe 300

Qy     272 ------------LAGLLAAAYQLYYGTKYRRF------------PPWLETWLQCRKQL 305
                      ||    ::|   :   |  |              |  : :  |   :
Db     301 vdymtqtrgqrsslaednessysrgfdmtytefdydlcnevvdvtcspkpdafnpcedim 360

Qy     306 G-----LLSFFFAMVHVA------------YSLCLPMRRSERYLFLNMAYQQVHANIEN 347
           |     :| :| ::: :              | | :|     |:|  |:|:
Db     361 gynilrvliwfisilaitgniivlvilttsqykltvp-----rflmcnlafad------- 408

Qy     348 SWNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALNWRE---------FSFIQSTL 398
                 :  ||  | : |:    |      : |::|:          |:  | |
Db     409 ------------lcigiyllliasvdihtksqyhnyaidwqtgagcdaagfftvfasel 455

Qy     399 G---YVALLISTFH------------------VLIYGWKRAFEEEYYRFYTPPNFV-LA 435
              |: :  :|                    |:: ||  ||    :  :   ::: ::
Db     456 svytltaitlerwhtlthamqldckvqlrhaasvmvmgwifafaaalfpifgissymkvs 515

Qy     436 LVLPSIVILDLLQL 449
           : ||  :   | ||
Db     516 iclpmdidsplsql 529


RESULT   9
R42082
ID   R42082 standard; Protein; 695 AA.
XX
AC   R42082;
XX
DT   05-MAY-1994  (first entry)
XX
DE   FSH receptor.
XX
KW   FSH; receptor; follicle stimulating hormone; GST;
KW   glutathione-S-transferase; primer; PCR; amplification;
KW   polymerase chain reaction; probe; antibody; overstimulation.
XX
OS   Homo sapiens.
XX
PN   WO9320199-A.
XX
PD   14-OCT-1993.
XX
PF   29-MAR-1993;   93WO-EP00780.
XX
PR   30-MAR-1992;   92EP-0200886.
XX
PA   (ALKU ) AKZO NV.
XX
PI   De Leeuw R,  Dijkema R;
XX
DR   WPI; 1993-336907/42.
DR   N-PSDB; Q50013.
XX
PT   New follicle stimulating hormone receptor - and derived
PT   antibodies, anti-idiotypic antibodies, and transfected cells,
PT   useful e.g. in diagnosis and as antidote for FSH overstimulation
XX
PS   Claim 7; Page 20-23; 42pp; English.
XX
CC   The primers given in Q50029-34 were used in the cloning of GST-FSH-
CC   R1, GST-FSH-R2 and GST-FSH-R3 fuslon protein constructs.
CC   Screening of the human testis cDNA library with a hFSH-R specific
CC   probe resulted in five recombinant phages positive in hybridisation.
CC   Sequence analysis was performed of the 2222 bp fragment of pGEM3Zcl
CC   (Q50013).
XX
SQ   Sequence   695 AA;


  Query Match             4.6%;  Score 107.5;  DB 14;  Length 695;
  Best Local Similarity   17.0%;  Pred. No. 0.0098;
  Matches   84;  Conservative   77;  Mismatches  148;  Indels  185;  Gaps   17;

Qy      79 HEDALTKTNIIFVAIHREHYTSLWDLRHLLVG----------------KILIDVSNNMR 121
           ||  : | | : :  |: | : :| :|::||:                  |:|:|: :|:
Db      98 helriekannl-lyinpeafqnlpnlqyllisntgikhlpdvhkihslqkvlldiqdnin 156

Qy     122 INQYPESNAEYLASLFPDSLIVKGFNVVSAWALQLGPKDASRQVYICSNNIQARQQVIEL 181
           |:           ::  :| :   |  |  |      |:  :::: |:
Db     157 ih----------tiernsfvglsfesvilwl----nkngiqeihnca---------- 189

Qy     182 ARQLNFIPIDLGSLSSAREIENLPLRLFTLWRGPVVVAISLATFFFLYSFVRDVIHPYAR 241
               |   :|  :||    :| ||  :|    |||:: ||      | |:  : :
Db     190 ---fngtqldelnlsdnnnleelpndvfhgasgpvlldisrtrihslpsyglenlkklra 246

Qy     242 NQQSDFYKIPIEIVNKTL-PIVAITLLSLVY---------------------------- 271
           :  |:|      ||  :||:   || |
Db     247 rstynlkklp------tleklvalmeasltypshccafanwrrqiselhpicnksilrqe 300

Qy     272 ------------LAGLLAAAYQLYYGTKYRRF------------PPWLETWLQCRKQL 305
                      ||    ::|   :   |  |              |  : :  |   :
Db     301 vdymtqtrgqrsslaednessysrgfdmtytefdydlcnevvdvtcspkpdafnpcedim 360

Qy     306 G-----LLSFFFAMVHVA------------YSLCLPMRRSERYLFLNMAYQQVHANIEN 347
           |     :| :| ::: :              | | :|     |:|  |:|:
Db     361 gynilrvliwfisilaitgniivlvilttsqykltvp-----rflmcnlafad------- 408

Qy     348 SWNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALNWRE---------FSFIQSTL 398
                 :  ||  | : |:    |      : |::|:          |:  | |
Db     409 ------------lcigiyllliasvdihtksqyhnyaidwqtgagcdaagfftvfasel 455

Qy     399 G---YVALLISTFH------------------VLIYGWKRAFEEEYYRFYTPPNFV-LA 435
              |: :  :|                    |:: ||  ||    :  :   ::: ::
Db     456 svytltaitlerwhtithamqldckvqlrhaasvmvmgwifafaaalfpifgissymkvs 515

Qy     436 LVLPSIVILDLLQL 449
           : ||  :   | ||
Db     516 iclpmdidsplsql 529
```

```
RESULT 10
W14782
ID   W14782 standard; Protein; 695 AA.
XX
AC   W14782;
XX
DT   20-JUN-1997  (first entry)
XX
DE   FSH receptor.
XX
KW   Follicle stimulating hormone receptor; FSH receptor;
KW   ovarian dysgenesis; hypergonadotropic hypogonadism; diagnosis.
XX
OS   Homo sapiens.
XX
PN   WO9711194-A1.
XX
PD   27-MAR-1997.
XX
PF   20-SEP-1996;   96WO-FI00501.
XX
PR   20-SEP-1995;   95US-0531070.
XX
PA   (UYHE-) UNIV HELSINKI LICENSING LTD OY.
XX
PI   Aittomaeki K,  De La Chapelle A,  Huhtaniemi I;
XX
DR   WPI; 1997-202900/18.
DR   N-PSDB; T63181.
XX
PT   Diagnosis of ovarian dysgenesis and carriers from DNA abnormalities
PT   - by amplifying DNA including follicle stimulating hormone receptor
PT   allele(s), i.e. codon 189, cleaving fragments, and examination
XX
PS   Disclosure; Page 18-21; 43pp; English.
XX
CC   The human follicle stimulating hormone (FSH) receptor (W14782)
CC   is a G-protein coupled transmembrane receptor.  A mutation in the
CC   fshr gene (see also T63181) is associated with ovarian dysgenesis,
CC   and methods for provided for the diagnosis of this disorder.
XX
SQ   Sequence   695 AA;


  Query Match             4.6%;  Score 107.5;  DB 18;  Length 695;
  Best Local Similarity   17.0%;  Pred. No. 0.0098;
  Matches   84;  Conservative   77;  Mismatches  148;  Indels  185;  Gaps   17;

Qy      79 HEDALTKTNIIFVAIHREHYTSLWDLRHLLVG----------------KILIDVSNNMR 121
           ||  : | | : : |: | : :| :|::||:                  |:|:|: :|:
Db      98 heiriekannl-lyinpeafqnlpnlqyllisntgikhlpdvhkihslqkvlldiqdnin 156

Qy     122 INQYPESNAEYLASLFPDSLIVKGFNVVSAWALQLGPKDASRQVYICSNNIQARQQVIEL 181
           |:           ::  :| :   |  |  |      |:  :::: |:
Db     157 ih----------tiernsfvglsfesvilwl----nkngiqeihnca---------- 189

Qy     182 ARQLNFIPIDLGSLSSAREIENLPLRLFTLWRGPVVVAISLATFFFLYSFVRDVIHPYAR 241
               |   :|  :|| :| ||  :|    |||:: ||      | |:  : :
Db     190 ---fngtqldelnlsdnnnleelpndvfhgasgpvildisrtrihslpsyglenlkklra 246

Qy     242 NQQSDFYKIPIEIVNKTL-PIVAITLLSLVY---------------------------- 271
           :  |:|      ||  :||:   || |
Db     247 rstynikklp-----tleklvalmeasltypshccafanwrrqiselhpicnksilrqe 300

Qy     272 ------------LAGLLAAAYQLYYGTKYRRF------------PPWLETWLOCRKOL 305
                       ||    ::|   :   |  |              |  : :  |   :
Db     301 vdymtqtrgqrsslaednessysrgfdmtytefdydlcnevvdvtcspkpdafnpcedim 360

Qy     306 G-----LLSFFFAMVHVA------------YSLCLPMRRSERYLFLNMAYQQVHANIEN 347
           |     :| :| ::: :              | | :|     |:|  |:|:
Db     361 gynllrvliwfisilaitgniivlvilttsqykltvp-----rflmcnlafad------- 408

Qy     348 SWNEEEVWRIEMYISFGIMSLGLLSLLAVTSIPSVSNALNWRE---------FSFIQSTL 398
                    :  ||  | : |:   |     : |::|:          |:   | |
Db     409 ------------lciqiyllliasvdihtksqyhnyaidwqtgagcdaagfftvfasel 455

Qy     399 G---YVALLISTFH------------------VLIYGWKRAFEEEYYRFYTPPNFV-LA 435
              |: :  :|                    |:: ||  ||    :  :   ::: ::
Db     456 svytltaitlerwhtithamqldckvqlrhaasvmvmgwlfafaaalfpifgissymkvs 515

Qy     436 LVLPSIVILDLLQL 449
           : ||  :   | ||
Db     516 iclpmdidsplsql 529


RESULT 11
Y58199
ID   Y58199 standard; peptide; 34 AA.
XX
AC   Y58199;
XX
DT   14-MAR-2000  (first entry)
XX
DE   Human STRAP-1 peptide, corresponding to STRAP-1 extracellular region 2.
XX
KW   Serpentine transmembrane antigen of the prostate; STRAP-1; prostate;
KW   transmembrane domain; type IIIa membrane protein; expression; cancer;
KW   prostate cancer; bladder cancer; colon cancer; pancreatic cancer;
KW   ovarian cancer; tumour antigen; immunisation; immune response;
KW   cellular; humoral; anticancer vaccine; antibody; detection; diagnosis;
KW   prognosis; monitoring; susceptibility; therapeutic inhibitor;
KW   drug targetting; recombinant protein.
XX
OS   Synthetic.
OS   Homo sapiens.
XX
PN   WO9962941-A2.
XX
PD   09-DEC-1999.
XX
PF   01-JUN-1999;   99WO-US12157.
XX
PR   01-JUN-1998;   98US-0087520.
PR   30-JUN-1998;   98US-0091183.
XX
PA   (UROG-) UROGENESYS INC.
PA   (AFAR/) AFAR D E.
PA   (HUBE/) HUBERT R S.
PA   (LEON/) LEONG K.
PA   (RAIT/) RAITANO A B.
PA   (SAFF/) SAFFRAN D C.
XX
PI   Afar DE,  Hubert RS,  Leong K,  Raitano AB,  Saffran DC;
XX
DR   WPI; 2000-072832/06.
XX
PT   Novel proteins useful as diagnostic markers and therapeutic targets,
PT   particularly for prostatic cancer  -
XX
PS   Disclosure: Page 22: 83pp: English.
XX
CC   Sequences Y58198-Y58200 represent synthetic peptides that correspond
CC   to the extracellular regions of STRAP-1 (serpentine transmembrane
CC   antigen of the prostate, Y58194). These peptides were used to raise
CC   monoclonal anti-STRAP-1 antibodies. STRAP-1 is the prototype
CC   member of the STRAP family of proteins (Y58194-Y58197) which
CC   exhibit a high degree of structural conservation, but which show
CC   no significant structural homology to known human proteins. The STRAP-1
CC   gene has been localised to chromosome 7p22. STRAP-1 is thought to be a
CC   type IIIa membrane protein and is expressed predominantly in prostate
CC   cells in normal human tissues. Structurally, STRAP-1 is a 339 amino
CC   acid protein characterised by six transmembrane domains and intracellular
CC   N- and C-terminal, suggesting that it folds in a "serpentine" manner into
CC   three extracellular and two intracellular loops. STRAP-1 mRNA and protein
CC   expression is maintained at high levels and throughout all stages of
CC   prostate cancer. STRAP-1 mRNA and/or protein is also overexpressed in
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CC   certain other cancers, lncludlng bladder, coion, pancreatic and ovarian
CC   cancer. The function of the STRAP protelns ls not known. They may be ion
CC   channels (from the presence of six transmembrane domalns, a feature
CC   which is shared by certain ion channeis) or gap-junction proteins
CC   (from immunohistochemlcal stainlng). STRAP-1 and STRAP-2 are cell-surface
CC   tumour antlgens. Immunlsation with a STRAP protein induces cellular and
CC   humoral immune responses against STRAP-expresslng cells. STRAP proteins
CC   may be used to ldentlfy speciflc-binding agents, to produce anticancer
CC   vacclnes and to generate speciflc antibodles. The antibodies may be used
CC   for detection, prognosis, and monltoring of cancers (or susceptibility to
CC   cancer), as therapeutlc inhibitors or to target therapeutlc agents to
CC   their site of actlon. STRAP nucleic acids may be used for recombinant
CC   proteln production, as diagnostic and prognostic reagents, for
CC   identifying STRAP-expresslng cells for screening inhibitors of STRAP
CC   expression and for therapeutlc modulation/inhibition of STRAP
CC   expresslon. Slnce high levels of STRAP proteins are exposed on the ceil
CC   surface, they are easily targetted by systemically admlnlstered agents,
CC   and because they are expressed mainiy on prostatic epithelial cells,
CC   agents targetted to them should have minimal side effects on other
CC   tlssues.
XX
SQ   Sequence   34 AA;

  Query Match              4.6%;  Score 107;  DB 21;  Length 34;
  Best Local Slmllarlty   58.8%;  Pred. No. 0.00011;
  Matches   20;  Conservative    5;  Mismatches    9;  Indels   0;  Gaps    0;

Qy    326 RRSERYLFLNMAYQQVHANIENSWNEEEVWRIEM 359
          ||| ||  || |||||  | |::| | :|||:|:
Db      1 rrsyrykllnwayqqvqqnkedawiehdvwrmei 34


RESULT  12
Y11840
ID   Y11840 standard; Proteln; 95 AA.
XX
AC   Y11840;
XX
DT   18-JUN-1999  (first entry)
XX
DE   Human 5' EST secreted protein SEQ ID No: 440.
XX
KW   Human; secreted protein; EST; expressed sequence tag; diagnosis;
KW   forensic; gene therapy; chromosome mapping: signal peptide; prostate;
KW   upstream reguiatory sequence; cytokine activity; cell proliferation;
KW   dlfferentiation; haematopoiesis reguiation; tissue growth regulation;
KW   reproductive hormone regulation; chemotactic: chemokinetic; haemostatlc;
KW   thrombolytic; anti-inflammatory; tumour lnhibitlon.
XX
OS   Homo saplens.
XX
PN   WO9906550-A2.
XX
PD   11-FEB-1999.
XX
PF   31-JUL-1998;   98WO-IB01232.
XX
PR   01-AUG-1997;   97US-0905144.
XX
PA   (GEST ) GENSET.
XX
PI   Duclert A,  Dumas Milne Edwards J,  Lacroix B;
XX
DR   WPI; 1999-153780/13.
DR   N-PSDB: X40562.
XX
PT   New isolated prostate-derlved nuclelc aclds - used to develop
PT   products which may have cytoklne, immune regulatory, haematopoiesis
PT   regulating, anti-infiammatory or tumour inhibition activity
XX
PS   Claim 34: Page 577: 675pp; English.
XX
CC   X40438 to X40715 represent 5' expressed sequence tags (ESTs) for human
CC   secreted proteins expressed in prostate, and encode the proteins given in
CC   Y11716 to Y11993 respectiveiy. The proteins given represent the signal
CC   peptide and an N-terminal fragment of a secreted protein. The nucleic
CC   acid sequences can be used for producing secreted human gene products.
CC   They can also be used to develop products for dlagnosls and therapy. The
CC   proteins obtained may have cytokine actlvity, celi prollferatlon and
CC   differentiation activlty, haematopolesls regulating actlvity, tlssue
CC   growth regulatlng actlvity, reproductive hormone regulatlng activity,
CC   chemotactic/chemokinetic activity, haemostatlc and thrombolytic activity,
CC   receptor/ligand activity, anti-inflammatory activlty, tumour lnhlblt1on
CC   activlty or other activitles. The products can be used in forensic, gene
CC   therapy and chromosome mapping procedures. The sequences can also be used
CC   for obtaining corresponding promoter sequences. The nuclelc aclds
CC   encodlng the signal peptides can be used for dlrectlng extracellular
CC   secretion of a polypeptide or the insertlon of a polypeptlde lnto a
CC   membrane, or importing a polypeptide into a cell.
XX
SQ   Sequence   95 AA;

  Query Match              4.6%;  Score 107;  DB 20;  Length 95;
  Best Local Similarity   46.5%;  Pred. No. 0.00052;
  Matches   20;  Conservative    8;  Mismatches   15;  Indels    0;  Gaps    0;

Qy    208 LFTLWRGPVVVAISLATFFFLYSFVRDVIHPYARNQQSDFYKI 250
          ||  |  |: :|  :|:  |||: :|:|||| | : |  ||||
Db     52 lfpqwhlplkiaailasltflytllrevihplatshqqyfyki 94


RESULT  13
Y12304
ID   Y12304 standard; Protein; 109 AA.
XX
AC   Y12304;
XX
DT   17-JUN-1999  (first entry)
XX
DE   Human 5' EST secreted proteln SEQ ID NO:335.
XX
KW   Human; secreted protein; EST; expressed sequence tag; diagnosis;
KW   forenslc; gene therapy; chromosome mappIng; slgnal peptide;
KW   upstream regulatory sequence; cytokine actlvity; cell proliferation;
KW   differentiatlon; haematopoiesls regulation; tissue growth regulation;
KW   reproductive hormone regulation; chemotactic; chemokinetic; haemostatic;
KW   thrombolytic; anti-inflammatory; tumour lnhibltlon.
XX
OS   Homo sapiens.
XX
PN   WO9906548-A2.
XX
PD   11-FEB-1999.
XX
PF   31-JUL-1998;   98WO-IB01222.
XX
PR   01-AUG-1997;   97US-0905135.
XX
PA   (GEST ) GENSET.
XX
PI   Duclert A,  Dumas Milne Edwards J,  Lacroix B;
XX
DR   WPI; 1999-153778/13.
DR   N-PSDB; X41137.
XX
PT   New nucleic acids encoding human secreted protelns - obtalned from
PT   cDNA llbraries prepared from e.g. liver, ovary, brain, prostate,
PT   kidney, lung, umbilical cord, placenta and colon tissue
XX
PS   Claim 27; Page 677; 824pp; Englsh.
XX
CC   X41094 to X41347 represent 5' expressed sequence tags (ESTs) for human
CC   secreted protelns, and encode the proteins glven ln Y12261 to Y12514,
CC   respectlvely. The protelns given represent the signal peptlde and an
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CC   N-terminal fragment of a secreted protein. The nucleic acid sequences
CC   can be used for producing secreted human gene products. They can also
CC   be used to develop products for diagnosis and therapy. The proteins
CC   obtained may have cytokine activity, cell proliferation/differentiation
CC   activity, haematopolesis regulating activity, tissue growth regulating
CC   activity, reproductive hormone regulating activity, chemotactic/
CC   chemokinetic activity, haemostatic and thrombolytic activity, receptor/
CC   ligand activity, anti-inflammatory activity, tumour inhibition activity
CC   or other activities. The products can be used in forensic, gene therapy
CC   and chromosome mapping procedures. The sequences can also be used for
CC   obtaining corresponding promoter sequences. The nucleic acids encoding
CC   the signal peptide can be used for directing extracellular secretion of
CC   a polypeptide or the insertion of a polypeptide into a membrane, or
CC   importing a polypeptide into a cell.
XX
SQ   Sequence   109 AA;


  Query Match             4.3%;  Score 102;  DB 20;  Length 109;
  Best Local Similarity   43.2%;  Pred. No. 0.0022;
  Matches   19;  Conservative    8;  Mismatches   17;  Indels    0;  Gaps    0;

Qy     207 RLFTLWRGPVVVAISLATFFFLYSFVRDVIHPYARNQQSDFYKI 250
           :||  |  |: :|  :|   |||: :|:| || | : |  ||||
Db      66 qlfpqwhlpikiaailaxltflytllrevxhplatshqqyfyki 109


RESULT  14
Y54039
ID   Y54039 standard; Protein; 476 AA.
XX
AC   Y54039;
XX
DT   27-MAR-2000  (first entry)
XX
DE   Amino acid sequence of a modified yeast SceI endonuclease.
XX
KW   SceI endonuclease; phosphodiester bond; yeast; genetic engineering;
KW   PCR; polymerase chain reaction; gene cloning.
XX
OS   Synthetic.
OS   Saccharomyces cerevisiae.
XX
PN   EP972836-A2.
XX
PD   19-JAN-2000.
XX
PF   21-MAY-1999;   99EP-0110008.
XX
PR   22-MAY-1998;   98JP-0141861.
XX
PA   (RIKA ) INST PHYSICAL & CHEM RES.
XX
PI   Morishima N,  Shibata T,  Mizumura H;
XX
DR   WPI; 2000-099856/09.
DR   N-PSDB; Z37079.
XX
PT   New modified endonuclease capable of recognizing specific nucleotide
PT   sequence, useful for genetic engineering techniques -
XX
PS   Claim 2; Page 18-21; 43pp; English.
XX
CC   The present sequence represents a modified SceI endonuclease. The
CC   endonuclease hydrolyses the phosphodiester bond of a polynucleotide
CC   chain. The endonuclease is the 50 kDa subunit of a yeast endonuclease.
CC   The endonuclease gene was modified so that it could be
CC   mass-produced in an expression system such as E. coli or yeast. The
CC   endonuclease polynucleotide sequence was modified by substituting
CC   codons that are unique to mitochondria (the gene is expressed in
CC   mitochondria) with universal codons. The endonuclease cuts molecules
CC   within sequence Z37078, and is therefore useful in genetic engineering
CC   techniques such as PCR (polymerase chain reaction) for cloning,
CC   amplifying and analysing genes.
XX
SQ   Sequence   476 AA;


  Query Match             4.3%;  Score 101;  DB 21;  Length 476;
  Best Local Similarity   20.7%;  Pred. No. 0.028;
  Matches   52;  Conservative   48;  Mismatches   85;  Indels   66;  Gaps   12;

Qy      62 NPKFASEFFPHVVDVTHHEDALTKTNI----IFVAIHREHYT-------------SLWD 103
           || | : |  ::           |||:    ||  |: : |:             :
Db     254 npyfvnafsinl----------ktnlakekiftniynklysdyklnqinnhipyynylk 302

Qy     104 LRHLLVGKILIDVSNNMRINQYPESNAEYLASLF--PDSLIVKGFNVVSAWALQLGPKDA 161
           : : |  | ::|: ||  :  :  ::  :|:|::   |:|: |
Db     303 innklpiknimdiknnywlagftaadgsflssmynpkdtllfknm-------------- 347

Qy     162 SRQVYICSNNIQARQQVIELARQLNFIPIDLGSLSSAREIENLPLRLFTLWRGPVVVAIS 221
             |  |: |  :: |:::| | ::      || |:|: ::: |  |: | |:       :
Db     348 -rpsyvis-qvetrkeliyliqe----sfdl-slsnvkkvgnrklkdfklftrttdelmk 400

Qy     222 LATFFFLYSFVRDVIHPYARNQQSDFYKIP----IEIVNKTLPIVAITLLSLVYLAGLLA 277
             |:| |  |   |   |:| :: |      |: |    :  : |    |:  :
Db     401 -----fiyyf--dkflpihdnkqfnyikffntfiksynwnnrvfglvlse--yinnikl 451

Qy     278 AAYQLYYGTKY 288
           |  ||  ||
Db     452 dnydyyyynky 462


RESULT  15
R22667
ID   R22667 standard; Protein; 503 AA.
XX
AC   R22667;
XX
DT   09-NOV-1992  (first entry)
XX
DE   50 kD subunit of SceI.
XX
KW   Endonuclease SceI; PAGE; chromatography; ENS2 gene; mitochondria: ss.
XX
OS   Sacchromyces cerevisae.
XX
FH   Key             Location/Qualifiers
FT   Domain          59..64
FT   Domain          136..145
FT   Domain          167..181
FT   Domain          218..226
FT   Domain          230..241
FT   Domain          274..278
FT   Domain          301..308
FT   Domain          315..326
FT   Domain          347..358
FT   Domain          478..488
XX
PN   JP04104793-A.
XX
PD   07-APR-1992.
XX
PF   21-AUG-1990;   90JP-0219566.
XX
PR   21-AUG-1990;   90JP-0219566.
XX
PA   (RIKA ) RIKAGAKU KENKYUSHO.
XX
DR   WPI; 1992-164281/20.
DR   N-PSDB; Q24134.
XX
PT   ENS2 gene encoding 50kD subunit of SceI endonuclease - used for mass
PT   prodn. of recombinant endonuclease in eg. Sacchromyces IAM4274
XX
PS   Claim 1; Page 2; 4pp; Japanese.
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XX
CC   The sequence given is the 50kD subunit of endonuclease SceI.  The
CC   sequence is given as it is represented in the specification and it
CC   appears to be derived from mitochondrial DNA due to the codon
CC   usage.  The purpose of the marked domains is unclear.
CC   Endonuclease SceI can be mass produced from the 50kD subunits
CC   expressed from the ENS2 gene.  The 50kD subunit was purified by
CC   treating SceI from eg. Sacchromyces IAM4274, and by denaturing the
CC   protein and subjecting it to PAGE, or by chromatography on a
CC   phosphocellulose column.
XX
SQ   Sequence   503 AA;


  Query Match             4.3%;  Score 101;  DB 13;  Length 503;
  Best Local Similarity   20.7%;  Pred. No. 0.03;
  Matches   52;  Conservative   48;  Mismatches   85;  Indels   66;  Gaps   12;

Qy      62 NPKFASEFFPHVVDVTHHEDALTKTNI----IFVAIHREHYT-------------SLWD 103
           || | : |  ::           |||:    ||  |: : |:             :
Db     281 npyfvnafsini----------ktnlakekiftniynklysdykinqinnhipyynylk 329

Qy     104 LRHLLVGKILIDVSNNMRINQYPESNAEYLASLF--PDSLIVKGFNVVSAWALQLGPKDA 161
           : : |  | ::|: ||  :  :  ::  :|:|::   |:|: |
Db     330 innklpiknimdiknnywlagftaadgsflssmynpkdtllfknm-------------- 374

Qy     162 SRQVYICSNNIQARQQVIELARQLNFIPIDLGSLSSAREIENLPLRLFTLWRGPVVVAIS 221
             |  |: |  :: |:::| | ::      || |:|: ::: |  |: | |:       :
Db     375 -rpsyvis-qvetrkeliyliqe----sfdl-sisnvkkvgnrklkdfklftrttdelmk 427

Qy     222 LATFFFLYSFVRDVIHPYARNQQSDFYKIP----IEIVNKTLPIVAITLLSLVYLAGLLA 277
           |:| |  |   |   |:| :: |     |:  |   :  : |    |:  :
Db     428 -----fiyyf--dkflplhdnkqfnyikfrfntfiksynwnnrvfglvlse--yinniki 478

Qy     278 AAYQLYYGTKY 288
           |  ||  ||
Db     479 dnydyyyynky 489


Search completed: March 14, 2001, 16:13:01
Job time: 46 sec
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